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ABSTRACT

A Language Fluency Project was set up to encourage eight culturally disadvantaged and mentally handicapped girls (11 to 13 years old) to verbalize more clearly and more fluently and to maintain a verbal interaction. The program consisted of having the group imagine that they were taking part in a television documentary program. Over a 20-week period, 30-minute discussion sessions were held on topics gauged for equal difficulty by independent observers. While the quantity of the children's language did not change, the quality of their verbal performance did increase significantly. Comparative data were gathered on a group of normal adolescent girls, and from study and observation of discussion transcripts a model of socialized language was proposed. (SBH)

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LANGUAGE FLUENCY PROJECT

An Investigation into the Development and
Training of Socialised Language of
Mentally Handicapped Children

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Language Fluency Project - Phase One

The language we command affects our capacity for communication, both with ourselves and with other people (Robinson 1972). In other words, the two main categories of language function are

- 1) as a system of responses that facilitates thinking and action for the individual, or intra-individual communication, and
- 2) as a system of responses by which individuals communicate with each other, or inter-individual communication.

But what are the influences at work on the child to encourage this ability? And why is it that some children have a more fluent speech pattern than others? According to Luria, the study of language and its development, is the key to our understanding of vital problems in human intellectual growth. He believes the mastery of language extends the scope of learning and control of the environment. The growth of the child's mental activity is seen to take place in certain determined social circumstances: between mother/child, child/teacher, child/child. Through this medium of actual communication and interaction with the environment, the child acquires from adults, the experience and knowledge of previous generations. From birth, the child learns through language, about the objects surrounding him, their similarities and differences, their relationships and functions. This whole process of transmission of knowledge and the formation of concepts through adult influences constitutes the central process of the child's intellectual and linguistic development.

In acquiring his first language, the child constructs hypotheses about it from the adult version which surrounds him. He will accept as part of his theory, any hypothesis which seems to make order among the

incoming signals (Deese 1970). Thus the incoming linguistic information is crucial to the extent that its signal construction becomes the target for the child's theory of language.

A child's theory of language thus has two main pillars of support: the internal and external environments in which the child functions. The child goes on to use his constructs of linguistic behaviour, to interact with his environment to create new situations from which he can benefit in a variety of ways.

Even when the child is functioning at a 'normal' level, many discrepancies appear. There has therefore arisen a vast body of literature dealing with language and social class differences, language differences arising from the child's positioning within the family group, language differences arising from differential rearing practices.....

How much more so, then, is the possibility of language disfunction when the child is mentally handicapped? Not only does the mentally handicapped child receive a different linguistic input than that of their normal counterparts, (Buism et al, 1974), but the lower the level of language development, the less actively the child participates in a mother/child interaction (Marshall et al, 1972).

Since language plays an important, if not vital, part of our everyday life, it was considered crucial that children, debilitated by their mental standards, be given as much opportunity as possible to develop their verbal potential. The Language Fluency Project 1976 was set up, under the auspices of the Scottish Council for Research in Education, and was conducted by the experimenter while teaching in a special school for mentally handicapped children. Within the structure of this project,

the concept of cultural, as well as mental, disability must be considered as a contributory factor in the aetiology of the handicapped group under surveillance. The concept of cultural deficit is not new - Montessori cited poverty as a cause, while Burt blamed the mother.

The Language Fluency Project (LFP 76) was set up to encourage the study group to verbalise more clearly, and more fluently, and to maintain a verbal interaction in order to be better understood by those about them, and as an added skill in the depleted repertoire of the mentally handicapped child.

The programme consisted of having the group imagine that they were taking part in a television documentary programme. This had the value that

- a) they developed their skills of imagination,
- b) they developed their skills of role-playing,
- c) because they were role-playing, they could hide behind their role and not feel embarrassed or ill at ease that their peers would laugh at them because they were saying 'silly things,' or producing opinions and attitudes considered inappropriate in the immediate social environment,
- d) they developed their ability to appreciate another's position, they explored their own traits or empathy toleration, and consideration, since the group as a whole was functioning on the basis that everyone was only as good as her neighbor's understanding of any utterance made. Throughout the programme, it was emphasized that they should
 - i) think clearly before speaking,
 - ii) make sure that what they were saying was relevant,
 - iii) consider how much of what they were saying added to the

general discussion,

iv) speak out clearly.

This was taught both theoretically, i.e. by saying to the children, "Think clearly before speaking" as well as practically, i.e. by speaking clearly about the topic under discussion and by drawing attention to any development made in an idea.

Both positive and negative reinforcement in the form of smiles, "Uh hugh," "Very good" and "No, try again," and ignoring of irrelevant utterances, were used as ongoing maintenance behaviours of the four rules set out above.

Aims of LFP 76

The aims of the LFP 76 programme were to show to the children how to develop their powers of clear thought and language, and to show them that within their peer group alone satisfaction and a better social interaction can be gained from clear verbal interchanges.

Although in academic terms this could be considered almost too basic even to be articulated, within the cognitive framework of the mentally handicapped child a keystone skill such as this is vital. However, the mentally handicapped child, with his underfunctioning ability for abstract thought, must learn, and must be taught this, in the way he learns everything else - by having it spelled out slowly and clearly, and by example, since within the structure of special education the concept of latent learning is too risky.

The Study Course

The group was made up of eight school girls. They formed a class in a special school, and as such, shared a class teacher, specialist teachers,

the same school timetable, and the same work/play time ratio. Thus no one child was subjected to individualised training within the school system. Each child came from socioeconomic classes 4 or 5, and five out of the eight came from broken homes.

The group was aged between 11.0 and 13.10 years ($\bar{X} = 12.8$) with IQ scores ranging between 60 and 80 ($\bar{X} = 71.5$). All had been referred to the special school following poor progress, an inability to cope with the pressures of a normal classroom, and poor attendance at normal school. Taking into consideration the home backgrounds of the children, each could be considered 'culturally disadvantaged' (Wedge and Prosser 1973), as well as mentally handicapped.

The experimenter, as class teacher was well acquainted with the group, and with their needs, as well as the aims of the project. All were part of the general educational climate surrounding the group as a whole. Bearing in mind the exploratory nature of the project, this was important, since there was no highlighting effect on the discussions which took place within the project, and therefore no inhibition, both social and mental, of the children's behaviour.

The Method

Over a twenty-week period, there were held thirty-minute discussion sessions, once per week, on topics gauged for equal difficulty by independent observers. The group was given one day's notice of the topics to be discussed. The topics, which were presented randomly, dealt with 'School,' 'Pets,' 'Food,' 'Music'.....

The group were accustomed to the presence of the tape recorder which recorded the discussions for subsequent analysis. As the teacher in the

classroom, the experimenter led and guided the discussions, as well as fulfilling the more practical role of maintainer of order so that creative discussion could take place.

No control group was set up for a number of reasons. The experimental group, being only eight in number, could not be divided, since this would have made each group too small. There did not exist within the immediate special educational regime, another group of comparable age and ability: to go into another special setting would have proved specious, due to the introduction of differing extraneous variables.

Analysis and Results

Having assembled twenty discussion sessions on tape, the method of scoring, relative to the aims of the study, had to be designed to maximise the potential of the data. The tapes were analysed using Flanders Interaction Analysis Categories System (Flanders 1960), a system by which the sequence of classroom interaction is coded for analysis on a 10 x 10 matrix, of the ten categories of teacher and pupil talk listed by Flanders. The individual children were then scored on a six point scale (0-5) for (1) lucidity, (2) maintenance of a theme, and (3) development of a theme. This was introduced to eradicate the effects where the children might be reinforced for speaking only, instead of being reinforced for constructive contributions to the discussion. (Burland 1972)

In general, while the quantity of the children's language did not change, the quality of their verbal performance did increase significantly. Their language was more spontaneous, as measured by category 9 on the FIAC system, less in response to questions from the teacher, and was, by the end of the twenty-week programme, almost 100% relevant to the

topic in hand. Discussions round a central theme can change the quality of child talk, and increase spontaneous verbal production. It can encourage the child to consider a concept or topic with a view to employing it as a means of interaction with his environment.

Language Fluency Project - Phase Two

In 'Language and the Social Man' (1974), Professor M. A. K. Halliday proposes that every individual is destined to become one of a group. He achieves this, not wholly, but critically, through language. Language comes to life only when it is functioning in some group situation, in some environment, and thus enables the individual to be an integrated part of his environment. Language, thus functions in the 'context of situation.' Some people can function linguistically in certain types of situation, but not in others, e.g. in a concrete but not in an abstract situation.

What is desirable, therefore, is the development of a 'socialised language,' so that it moves from the 'clear cut, discrete, protolanguage of infancy, to the polyphonic language of maturity, where a number of threads run simultaneously.' (Halliday 1973)

While it would be more than just optimistic to suggest that mentally handicapped subjects would ever reach a polyphonic language of maturity, the initial analysis of LFP 76 suggested that children could be educated in their use of language in order to give them a confidence and security in a mode of communication which is of such vital, personal and public importance today.

However, in order to be equipped to devise a programme to encourage an acceptable standard of socialised language performance, it must first be ascertained the components which the mentally handicapped child brings

to the situation, and the structure of the language which he employs to interact with his environment.

The twenty tapes from LFP 76 were transcribed for subsequent analysis, along with four comparison tapes, recorded from the original study group, one year after the beginning of the project, and six tapes from a group of normal adolescent girls, of the same age and socioeconomic status. These comparative data will offer (a) a 'within subject' comparison over time of the mentally handicapped group, and (b) a 'between subject' comparison of normal and mentally handicapped subjects.

Development of the Analysis

In deciding on the initial analysis of the transcripts, many factors had to be taken into account. A basic MLU analysis for each child was not relevant, in that it is the quality, rather than the quantity of linguistic performance that is the concern of this project. An initial analysis based on grammar and structure was also considered inappropriate in that the use of language in a social situation is not based solely on features linked with grammar and structure, but more with the characteristics of the verbal interchange which promote social interaction, and the acceptance of the speaker into the social situation, as an integrated social organism. An analysis system had to be found which categorised the utterances made by both teacher and child.

The Flanders Interaction Analysis Categories system was considered as it had been used in LFP 76. However, the previous use of this in the similar situation (McCormack 1974) had shown that the system was too structured, and too classroom oriented, too related to the teacher/learner situation to be useful in this discussion session situation, where the emphasis was on informality, and social interchange.

The analysis of what is happening in a classroom is a notoriously inefficient method of collecting data which are other than global. Hamilton and Delamont (1976) outline the faults of classroom analysis as being (a) It ignores the context in which the data are collected. Because they are divorced from the prevalent social and temporal context, the data may gloss over aspects of the interaction relevant to their interpretation. (b) Such analysis is concerned only with overt and observable behaviour and takes no account of the intentions which lie behind behaviour. (c) It is concerned with what can be categorised and measured. By this "pigeon-holing," data may be lost or distorted. (d) It utilises pre-specified categories.

Within the realms of this study all four comments are relevant. The mentally handicapped child requires a stable routine within which to function. His mood states can be affected by variables which need not even be present in the prevailing situation. Extraneous factors, such as the weather and whether dad was drunk last night and beat him up, are gross, sometimes identifiable, but immeasurable imbalancers which can alter the whole structure of the personalities juxtaposed in the group.

Inevitably, every individual has such factors working on him in every situation, and at all times. However, due to his lowered capacity the retarded child is less able to cope with any change in the aspects of his environment, which he considers of often crucial importance.

Again, because of his lowered capacity, although indeed this can be said too of many 'normal' people, the child may not understand or be able to rationalise, his changing emotional state, and through his own frustrations, and fear at his own confusion, bring to bear on the situation

many factors not present in a comparable 'normal' situation.

The benefit, however, of the category system is that it gives the researcher a structure within which to base his observations, and give a varying and multifaceted situation, an organisational structure which can then be clothed with the experimenter's own observations in any given situation. It also makes comparison of research more meaningful. However, the category system leaves no room for the host of minor, non-specific interchanges which occur between teacher and pupil, during the course of any half-hour, as well as predisposing the researcher to interpret certain acts in a highly specific fashion.

In a special classroom, much of the interaction is of a fairly supportive nature, a kind of hidden 'oiling of the social wheels,' which is necessary for the classroom to function. Excitable children, and those tending towards aggressive and violent outbursts, must be kept calm, so that no frustration builds up. In most category systems, which have been designed for use primarily in normal schools, this aspect of interaction is not given the weight it deserves, since it plays a less major part in the normal classroom situation.

What was needed, therefore, was a loosely constructed system, which allowed for the particular aspects of the special classroom, including its remarkable social variability, while still providing an academic structure to allow research to continue.

In attempting to define the global term 'language,' Halliday (1974) has sought to establish certain general positive criteria of 'relevance,' i.e. a definition of language, based on factors relevant to the situation in hand. As these criteria will relate ultimately to the demands

that we make of language in our lives, the nature of the demands must be considered. Halliday does so from the point of view of the child, as this will help decide what is relevant to the teacher, in defining the language used in the classroom. He outlines seven functions of language used by the child:

1. Instrumental
2. Regulatory
3. Personal
4. Interpersonal
5. Heuristic
6. Imaginative
7. Representational

This seemed a good basis for the initial analysis of the LFP transcriptions. However, it quickly became apparent that such global measure was not totally appropriate to the needs of the project. An extended structure was therefore developed. The 'instrumental,' 'regulatory,' 'heuristic,' and 'imaginative' components were retained. The 'personal' and 'representational' models were divided into 'spontaneous' and 'initiated' categories. The mentally handicapped child in his lifetime experiences many failures. He is, because of repeated lack of success, inconfident about his own ability. He will sometimes maintain silence, unless or even when spoken to. Built into the spontaneous/initiated dichotomy, there is therefore the value judgement of social progress for the individual child, where it is better to have spontaneous responses, since this implies added confidence, in comparison to that of the child who speaks when spoken to.

The 'interactional' model was also divided into two components, but this into (a) statement and (b) question, the two main aspects of an interactional utterance.

To summarise, the Classroom Analysis System (CAS) as used in this analysis was based on the model structure proposed by Halliday (1974), and was extended to suit the needs of the project as follows:

INSTRUMENTAL:	here language is used for the satisfaction of needs. It is the "I want" function.
REGULATORY:	this the 'do as I tell you' function, language in the control of behaviour.
SPONTANEOUS PERSONAL:	this is the spontaneous expression of identity, the 'here I come' function.
INITIATED PERSONAL:	the expression of identity in response to an invitation. It is an acknowledgement of identity.
INTERACTIONAL STATEMENT:	the 'getting along' with others function, an expression of belonging.
INTERACTIONAL QUESTION:	the 'may I join you?' function, or 'are you and I the same'?
HEURISTIC:	the use of language to learn, to explore reality, the 'tell me why' function.
IMAGINATIVE:	the 'let's pretend,' whereby the reality is created and what is being explored is the child's own mind.
SPONTANEOUS REPRESENTATIONAL:	the 'I've got something to tell you' function, offered spontaneously as a social interaction.

INITIATED REPRESENTATIONAL: the 'Yes I'll tell you' function, in response to a heuristic utterance, or support utterance.

SUPPORT: a supportive utterance with an implied invitation to continue, a 'Yes, go on..' statement.

PADDING: a 'clothing' utterance, made to fill up social silences. A statement like this offers nothing in the way of new information and is derived from social pressure.

ACKNOWLEDGEMENT: a statement which accepts or acknowledges information, but carries no invitation to continue.

INCOMPLETE UTTERANCE: an unfinished utterance which cannot be categorised.

Transcripts of the discussion sessions were reanalysed using CAS, each utterance being placed in one of the fourteen categories. Individual speakers' totals were computed for each category, and "teacher" and "pupil" totals were calculated in order to compute a teacher/pupil utterance ratio.

It was then considered necessary to investigate the differences, if any, between the socialised language of the MH group, and that of a normal group. Similar discussion sessions were made therefore, with a normal group, matched age, and socioeconomic status, and the transcripts analysed using CAS.

The two sets of data were compared using a Kruskal Wallis Analysis. Between the normal and MH groups under study there appeared significant differences in both quantity and quality of linguistic output within the

discussion group situation. The normal group displayed a much larger verbal output than did the MH group, thus suggesting less reliance on the teacher's contribution to the maintenance of the interactive situation.

As regards the quality of utterances, significant differences appeared in all categories, except the Instrumental, Regulatory, Initiated Personal, Interactional Question, Imaginative, and Incomplete Utterance.

The normal group showed significantly higher scores on Spontaneous Personal, Interactional Statement, Support, Padding and Acknowledgement categories, showing a greater skill in socialised language, sensitivity to situational cues, and interactive ability.

The MH group showed significantly higher scores on the Heuristic, Spontaneous and Initiated Representational categories, displaying their greater dependence on the teacher-pupil relationship within the discussion situation, and highlighting the lack of both skill in interactive situations and situational sensitivity.

There emerged a pattern in the pupil scores of a self-supporting interactive system within the normal group, with whom the teacher functioned as an observer, and the interaction of the MH group supported by the teacher as the pivot through which all communication had to be filtered.

Language Fluency Project - Phase Three

From a global assessment of the interactive system, i.e. CAS, it was considered desirable to construct an individual assessment of the child's ability to use socialised language, rather than the discrete performance score computed for each child on CAS.

From study and observation of the transcripts, there was proposed a model of socialised language, comprising eleven component skills as follows:--

LUCIDITY:	the ability to make oneself understood.
MAINTENANCE:	the ability to maintain verbal interaction.
DEVELOPMENT:	the ability to offer linguistic support to the verbal interaction, to amplify and enlarge on a theme, e.g. introduction of new aspects, new areas of discussion.
INTER-INDIVIDUAL AID:	the ability to offer linguistic support to a member of the group in difficulty.
SOCIAL CONTINUANCE:	the ability to maintain verbal interchange, to fill social gaps, or 'embarrassing silences.'
MORAL JUDGEMENTS/ PERSONAL OPINIONS: (self)	the spontaneous expression of judgements, opinions, with reference to self.
MORAL JUDGEMENTS/ PERSONAL OPINIONS: (others)	the expression of judgments, opinions with reference to others.
PEER GROUP INTERACTION:	the ability to interact with members of peer group without the support from the teacher.
ADULT INTERACTION PROCESS:	the ability to interact independently with adults.
HUMOUR:	the ability to use humour in a verbal interchange.
WORD PLAY:	the ability to enjoy words as an end in themselves, rather than purely as a means to an end.

Using these eleven component skills, a Socialised Language Profile (S.L.P.) was constructed to assess the individual child's ability to use socialised language. Using an initial sample of fifty children, the SLP is at present being analysed, utilising factor analysis, and item discrimination techniques.

Having refined the SLP into a valid assessment instrument, it is proposed to assess a hundred normal children for comparative purposes, and then complete a large-scale survey of MH children.

Highlighting of differences between the MH and normal child's socialised language, as already suggested by LFP Phase Two will yield opportunities to set up training and remediation programmes for children, assessed as deficient in one or more skills, by SLP. These programmes would aim at offering to the MH child, debilitated often by subcultural, as well as mental or physical handicap, a confidence to interact with his environment, through the use of skill peculiar to our species, thus fulfilling the psychological and social needs of every person, and maximising his potential as an integrated unit in our social structure.

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